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NOTES

REPRODUCTION COST AS A BASIS OF VALUATION

Since the public has demanded regulation of public utilities, commissions as the agencies of public control have been groping for some sort of standard of valuation. Engineers appointed by the commissions, other engineers, and attorneys representing the utility companies, and self-appointed economists with academic interests, have for a generation wrestled with problems of valuation. With the enactment of the Railroad Valuation Amendment to the Interstate Commerce Act, the problems of valuation were recognized as being national in scope. The importance of these problems was re-emphasized by the Esch-Cummins Bill which requires the Interstate Commerce Commission to fix rates with reference to earnings upon a valuation of the railroads determined by itself.

A widely accepted method of valuation is what is known as "reproduction cost." By reproduction cost is meant the expense of reproducing a property at the price current at the time of the "valuation." A number of states have adopted this method.¹ In *Smyth vs. Ames* the Supreme Court mentioned this method along with others to be used in ascertaining the value of a public utility.² The amendment to the Act to Regulate Commerce, passed in 1913, called upon the Interstate Commerce Commission to make use of "cost of reproduction new" as one of the methods in finding a valuation of the railroads of the country.³

This method is open to objections well-nigh as serious as those offered to the capitalization of earnings. It is not employed uniformly by the different regulatory bodies. Some are inclined to apply the method very narrowly, as the Texas Railroad Commission, which included nothing but visible physical property.⁴ Others are more

¹ Arkansas, *Kirby's Digest*, 1904, Sec. 6823; Florida, Towns 1907, chap. 5622, Sec. 1; Georgia, Code 1911, Sec. 2664; Kansas, General Statutes, 1909, Sec. 7217; Nebraska, Acts 1909, chap. 107, Sec. 3 & 4; Oklahoma, Constitution, Art. IX, Sec. 29; Oregon, General Laws, 1907, chap. 53, Sec. 46; Texas, Sayles Civil Statutes, 1897, Art. 4570, Wisconsin.

² 169 U.S. 466.

³ Section 19a, the Act to Regulate Commerce.

⁴ *Third Annual Report of Texas Railroad Commission*, p. ix.

liberal, as California, where the court interpreted "reproduction cost" to mean the estimated cost in cash of acquiring the operative right of way and other operative real estate, and of reproducing, in the condition in which it was acquired, the other physical property of the public utility, as of the date of valuation; to which are added overhead expenditures of engineering, law, interest, commissions, and other similar items.¹

No method is likely to be applied with complete uniformity, but "reproduction cost" lends itself so easily to variations in its use that one is justified in raising this objection to it as a workable method. As the California court pointed out, reproduction cost is an estimated cost.¹ The estimates vary with the personnel of the engineering staff making them; they vary with the policy adopted as to what portion of the assets shall be included in the valuation; they vary with the fluctuations in the price-level. Professor Vanderblue has very effectively shown the worthlessness of this method²—which after all amounts to little more than opinion, estimates, guesses, brought together under varying circumstances, subject to varying biases, and offering many different results.

An even more serious objection to reproduction cost, or reproduction cost new, as it is sometimes called, is that it tends when applied to put public utilities in the class of speculative enterprises. The valuation used as a rate base, the "value" fixed by law upon which earnings may be made, when found by this method depends, among other things, upon the price-level. If a utility company can get its property valued by a commission using this method when prices are high it may reap great profits and at the same time conceal them from the public. If the valuation be made when prices are low, the company may suffer great loss and at the same time be thought by the public to be earning current returns upon investment. Suppose that a utility company assembled its plant in the late eighties of the nineteenth century, and that a valuation was made in 1894 or 1895. Prices had fallen in those years until it would have cost much less to reproduce a plant than to build it a few years before. A "fair return" upon the reproduction cost in 1895 would not represent the current return upon actual investment made a few years earlier. Again, suppose a plant assembled in the winter of 1914, and that valuation by reproduction cost new was made in 1920. It would, in 1920, cost to reproduce the plant about

¹ Re San Francisco-Oakland Terminal R.R. Co., P.U.R. 1915-D 44.

² Homer B. Vanderblue, *Railroad Valuation*, chaps. ii, iii, iv.

double the amount actually invested in 1914. A "fair return" at interest current in 1914 upon such a valuation made in 1920 would give the investors an enormous profit. Let us say that the plant in 1914 cost \$1,000,000. Net earnings of 6 per cent on the amount would be \$60,000. In 1920 the same property could be reproduced or duplicated at about \$2,000,000. Six per cent on this sum would be \$120,000. But since interest rates have also advanced, the company might insist upon and obtain permission to fix rates to yield 8 per cent. Eight per cent on a valuation of \$2,000,000 would be \$160,000, that is to say 16 per cent on the amount actually invested. By this simple expedient of a valuation, made to protect the public, the public would be called upon to pay a return upon twice the amount invested in the property, to tax itself in rates to give reality to this estimated value, and enable the owners to show a commercial value double the principal sum actually invested. Under a government control making use of reproduction cost new to find the value, the commercial value of a utility property would fluctuate with the rise and fall of prices. A certain sum would be put into the property, but how much the owners could earn upon it, the commercial value of their investment, would depend upon all the complex forces which are reflected in the price-level. How much the investment would be worth ten years after it was made would not depend altogether upon honesty and ability of management and confidence and support of patrons, but even more upon unforeseeable contingencies, forces beyond control of the management, all those accidents in different parts of the world which influence the movement of prices. Under such a control effectively applied, an investor in a public utility would gamble on the rise and fall of prices. Instead of utility properties attracting careful investors, they would appeal more to that class who speculate in mines and oil propositions. A business owned by speculators is more apt to be "skinned" for the sake of immediate returns, than one owned by investors. It is to the public interest that utility properties be owned by those looking for a moderate and regular return upon investment. In the long run the public will get better service, if the utility properties can be developed so as to draw this class of investors. Reproduction cost new tends to defeat this end, and to make utility properties highly speculative ventures.

Texas furnishes an actual illustration of the way in which this method arbitrarily forces up or down the commercial value of what has been actually invested. The Railroad Commission of Texas, 1893-95, made a valuation of most of the railroads of the state. They based

their estimates upon prices slightly above those of 1893-95.¹ Aside from the fact that they arbitrarily ruled out items which should have been included, the prices adopted for estimating the cost of reproducing the railroad properties were so low in those years of panic and of abnormal depression, that they found the valuation of 8,859 miles of road with all equipment to be \$140,367,122, or \$15,844² per mile. The capitalization of roads amounted to \$367,677,044, or more than \$42,000 per mile.³ That is to say, the capitalization was \$227,300,922 more than the reproducing cost new, or the "value" found by the commission. Some roads, perhaps most of them, were overcapitalized, but it is hard to believe that the commission found a valuation entirely fair to the investors in the roads. Soon after this valuation, prices began steadily to rise. Yet during the years of phenomenal prosperity around the beginning of the present century, the Railroad Commission of Texas insisted that the value of the roads of the state was that found by a calculation with reference to prices current during the lean years following the panic.⁴

In a recent hearing before the Public Utilities Commission of Dallas, Texas, the telephone company of that city submitted through its attorney a brief, setting out the different items entering into the company's property, and showing what they estimated it would cost to reproduce the plant under present prices and conditions. They were asking for an increase in rates of 100 per cent, since nothing less would in their opinion pay a fair return upon reproduction cost of the property.⁵ The mayor, a member of the commission, pointed out that such a valuation would be for the patrons of the company to pay a return upon double the investment made to serve them.

From this it would seem that the use of reproduction cost, or of any variation of that method, is more apt to lend itself to injustice than to justice.

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¹ *Third Annual Report of the Texas Railroad Commission*, p. 9.

² *Fourth Annual Report of Texas R.R. Comm.*, p. 8.

³ *Third Annual Report of Texas R.R. Comm.*, p. xviii.

⁴ *Second Annual Report of Texas R.R. Comm.*, 1896-1910.

⁵ *Dallas Morning News*, August 5-8, 1920.